



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,416	06/13/2006	Akimitsu Tsuda	1176/306	6382
46852	7590	12/03/2009		
LIU & LIU 444 S. FLOWER STREET, SUITE 1750 LOS ANGELES, CA 90071			EXAMINER CHIENT, LUCY P	
			ART UNIT 2871	PAPER NUMBER
			NOTIFICATION DATE 12/03/2009	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

wliu@liulaw.com
julien@liulaw.com
docket@liulaw.com

Office Action Summary	Application No. 10/596,416	Applicant(s) TSUDA, AKIMITSU	
	Examiner LUCY P. CHIEN	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/14/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

Applicant's arguments filed 10/14/2009 have been fully considered but they are not persuasive.

Applicant's arguments that Yuichi does not disclose the light source arranged on one edge surface is not persuasive. Yuichi discloses in Drawing 1 shows the light source (105) on one edge surface of the light guide. Also Drawing 2, which is a side view of Drawing 1 shows the light source (105) on one edge surface of the light guide.

Therefore, the rejection is maintained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1-3,8,9,19 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirayama Yuichi (JP 2002-372711).

Regarding Claim 1,8.

Hirayama Yuichi (Drawing 1, Drawing 3) discloses a backlight for a display including a light guide means (106), having a pair of main surfaces (where 112 is pointing to) faced each other and a pair of edge surfaces (the edges that are perpendicular to 112) faced each other, for guiding the light (106) from a light source (105) arranged on one edge surface to both of main surfaces; and control means

Art Unit: 2871

(108)for controlling said light source for illuminating a main lighting region having relatively large size on a side of one main surface through said light guide means (106), and illuminating a sub-lighting region (109) having relatively small size on a side of another main surface through said light guide means (106).

Regarding Claim 2,

Hirayama Yuichi (Drawing 1) discloses wherein said controlling means comprises mode select means for selecting either a mode of illuminating the main lighting region or a mode of illuminating the sub-lighting region; and switch means for switching the power supply to said light source according to the mode selected by said mode select means [0005]. Therefore, when the cell phone is in a folded state (109 on top of 108) the main LCD (108) is turned off and the sub liquid crystal panel (109) is turned on.

Regarding Claim 3,

Hirayama Yuichi (Drawing 1) discloses wherein said switch means supplies the whole light source (105) with the electric power in the mode of illuminating the main lighting region, and supplies a part of the light source with the electric power in the mode of lighting to the sub-lighting region.

Regarding Claim 9,19,

Hirayama Yuichi (Drawing 7) a light guide (5) having a first and second light emitting surfaces (113,4) facing each other and a plurality of edge (where 105 is located) surfaces between the first and second light emitting surfaces, wherein the first

Art Unit: 2871

light emitting surface emits light in a first lighting region that illuminates a first display (108), and the second light emitting surface emits light in a second lighting region that illuminates a second display (109), and wherein the first lighting region (108) overlaps the second lighting region (109) with respect to the first and second light emitting surfaces of the light guide; a light source (105) positioned along one of said plurality of edge surfaces, wherein light from said light source is directed to the first lighting region and the second lighting region.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirayama Yuichi (JP 2002-372711) in view of Im et al (US 20060274226).

Regarding Claim 4

Hirayama Yuichi (Drawing 1, Drawing 3) discloses everything as disclosed above and said switch means supplies LEDs having higher contribution to the illumination with the electric power in the mode of illuminating the sub-lighting region (that happens when when folding the cell phone, the main LCD 108 is closed, so therefore the sub LCD 109 is lit [0005]).

Hirayama Yuichi does not disclose said light source has a plurality of LEDs arranged in parallel.

Im et al discloses [0050] the plurality of LED lamps may be arranged parallel to each other in an edge of the light guide.

It would have been obvious to one of ordinary skill in the art to modify Hirayama Yuichi to include Im et al's plurality of LED lamps may be arranged parallel to each other in an edge of the light guide motivated by the desire to increase the light utilization efficiency [0050] and abstract.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirayama Yuichi (JP 2002-372711) and view of Im et al (US 20060274226) in view of West et al (US 20050001537).

Regarding Claim 5.

Hirayama Yuichi and Im et al disclose everything as disclosed above

Hirayama Yuichi and Im et al do not disclose wherein said LEDs having higher contribution to the illumination are center-located LEDs of the plurality of LEDs arranged in parallel.

West et al discloses (page 5, claim 13) wherein said LEDs having higher contribution to the illumination are center-located LEDs of the plurality of LEDs arranged in parallel to improve color uniformity, therefore to provide a uniform distribution of light.

It would have been obvious to one of ordinary skill in the art to modify Hirayama Yuichi and Im et al to include West et al's LEDs having higher contribution to the illumination are center-located LEDs of the plurality of LEDs arranged in parallel motivated by the desire to improve color uniformity, therefore to provide a uniform distribution of light (page 5, claim 13)

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirayama Yuichi (JP 2002-372711) in view of Hosseini et al (US 20010001595).

Regarding Claim 6.

Hirayama Yuichi discloses everything as disclosed above.

Hirayama Yuichi does not disclose wherein said light guide means has diffusion means and an isotropic prism member on both of the main surfaces respectively.

Hosseini et al discloses light guide means has diffusion (32) means and an isotropic prism member BEF.TM.(35) on both of the main surfaces respectively to provide better illumination over the surface are of the display [0006] and [0043].

It would have been obvious to one of ordinary skill in the art to modify Hirayama Yuichi to include Hosseini et al's light guide means has diffusion means and an isotropic prism member on both of the main surfaces respectively motivated by the desire to provide better illumination over the surface are of the display [0006] and [0043].

Art Unit: 2871

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirayama Yuichi (JP 2002-372711) in view of Higashiyama (US 7156546)

Regarding Claim 7,

Hirayama Yuichi discloses everything as disclosed above.

Hirayama Yuichi does not disclose wherein said light guide means has a semitransparent reflective member on the main surface of the sub-lighting region side.

Higashiyama discloses wherein said light guide means has a semitransparent reflective member on the main surface of the sub-lighting region side, making the sub lighting region a semitransparent display (column 3, rows 44-53)

It would have been obvious to one of ordinary skill in the art to modify Hirayama Yuichi to include Higashiyama's light guide means has a semitransparent reflective member on the main surface of the sub-lighting region side, (column 3, rows 44-53) motivated by the desire to have a semitransparent reflective display element which can perform both transmission display realized by controlling transmission of light emerging from the surface light source device and reflection display realized by controlling the transmission of external light incident from an observation side (column 3, rows 44-53).

Claim 9-11,13,14,19,20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kin Kochu (JP 2001-067049) in view of Nagakubo et al (US 20040100423)

Regarding Claim 9,19,

In addition to Kin Kochu and Nagakubo et al as disclosed above, Kin Kochu (Drawing 5) discloses a light guide (A) having a first and second light emitting surfaces (A touching both LCP 200,300) facing each other and a plurality of edge (where 100 is located) surfaces between the first and second light emitting surfaces, wherein the first light emitting surface emits light in a first lighting region that illuminates a first display (200), and the second light emitting surface emits light in a second lighting region that illuminates a second display (300), and wherein the first lighting region (200) overlaps the second lighting region (300) with respect to the first and second light emitting surfaces of the light guide; a light source (A)

Kin Kochu discloses a light source but does not disclose a light source arranged on one edge surface.

Nagakubo et al discloses a light source arranged on one edge surface to both of main surfaces of the light guide to supply light to the displays.

It would have been obvious to one of ordinary skill in the art to modify Kin Kochu to include Nagakubo et al's light source on the edge surface of the light guide motivated by the desire to supply light to the light guide, therefore illuminating the liquid crystal display panels.

Regarding Claim 10.

In addition to Kin Kochu and Nagakubo et al as disclosed above, Kin Kochu (Drawing 5) wherein the first lighting region covers a first illumination area (200) and a second lighting region covers a second illumination area (300), wherein the second illumination area (300) is relatively smaller than the first illumination area (200)

Art Unit: 2871

Regarding Claim 11,

In addition to Kin Kochu and Nagakubo et al as disclosed above, Kin Kochu (Drawing 5) wherein the second illumination area overlaps entirely within the second illumination area (300). All of light guide A that covers all of LCP (300) which is the second illumination area.

Regarding Claim 13,20,

In addition to Kin Kochu and Nagakubo et al as disclosed above, Kin Kochu (Drawing 5) discloses wherein said controlling means (100) comprises mode select means for selecting either a mode of illuminating the main lighting region (200) or a mode of illuminating the sub-lighting region (300); and switch means ([0029] and [0065] and drawing 7) for switching the power supply to said light source according to the mode selected by said mode select means.

Regarding Claim 14,,

In addition to Kin Kochu and Nagakubo et al as disclosed above, Kin Kochu (Drawing 5) discloses wherein the amount of light from the light source (A) is controlled to be relatively less when light is to be emitted through the light guide (A) to illuminate the second display (300). It occurs because with respect to the amount of light that enters the main display (200), the second display (300) will have less light entering it.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kin Kochu (JP 2001-067049) and of Nagakubo et al (US 20040100423) in view of Ishikawa et al (US 6396634)

Regarding Claim 12.

Kin Kochu and Nagakubo et al discloses everything as disclosed above.

Kin Kochu and Nagakubo et al do not disclose wherein said light guide means has a semitransparent reflective member on the main surface of the sub-lighting region side.

Ishikawa et al (abstract and column 2, lines 45-55) discloses wherein said light guide means has a semi-transparent reflective member on the main surface of the sub-lighting region side to be able to emit light to the display with good efficiency.

It would have been obvious to one of ordinary skill in the art to modify Kin Kochu and Nagakubo et al to include Ishikawa et al's light guide means has a semitransparent reflective member on the main surface of the sub-lighting region side motivated by the desire to emit light to the display with good efficiency (abstract and column 2, lines 45-55).

Claim 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kin Kochu (JP 2001-067049) and of Nagakubo et al (US 20040100423) in view of Im et al (US 20060274226).

Regarding Claim 15.

Kin Kochu and Nagakubo et al discloses everything as disclosed above.

Kin Kochu and Nagakubo et al do not disclose light source has a plurality of LEDs arranged along the plurality of edge surfaces of the light guide wherein the controller is configured to switch on a first set of number of light emitting devices when light is desired to be emitted through the light guide to illuminate the first display, and a second set of a different number of light emitting devices when light is desired to be emitted through the light guide to illuminate the second display.

Im et al discloses [0050] the plurality of LED lamps may be arranged parallel to each other in an edge of the light guide. It would have been obvious if Kin Kochu has a controlling means (100) comprises mode select means for selecting either a mode of illuminating the main lighting region (200) or a mode of illuminating the sub-lighting region (300); and switch means ([0029] and [0065] and drawing 7) for switching the power supply to said light source according to the mode selected by said mode select means., then it would be obvious to be able to switch on the first or second sets of LED's to illuminate the first or second display.

It would have been obvious to one of ordinary skill in the art to modify Kin Kochu and Nagakubo et al to include Im et al's plurality of LED lamps may be arranged parallel to each other in an edge of the light guide motivated by the desire to increase the light utilization efficiency [0050] and abstract.

Regarding Claim 16.

Art Unit: 2871

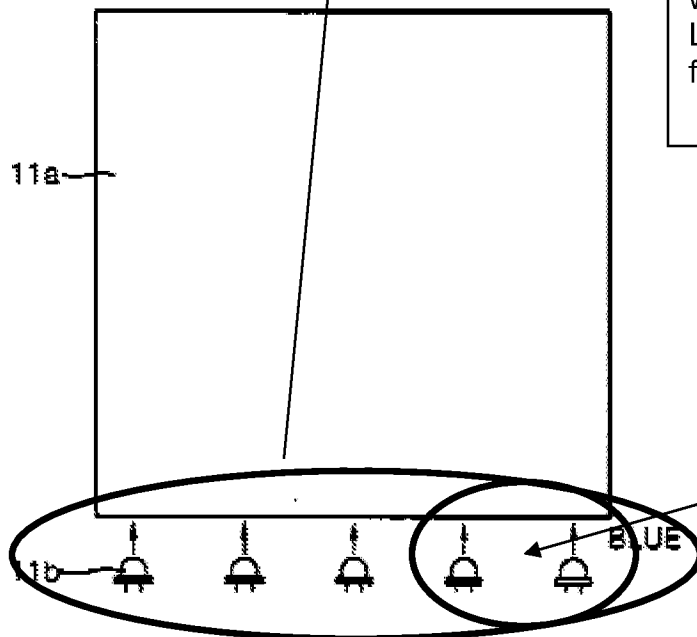
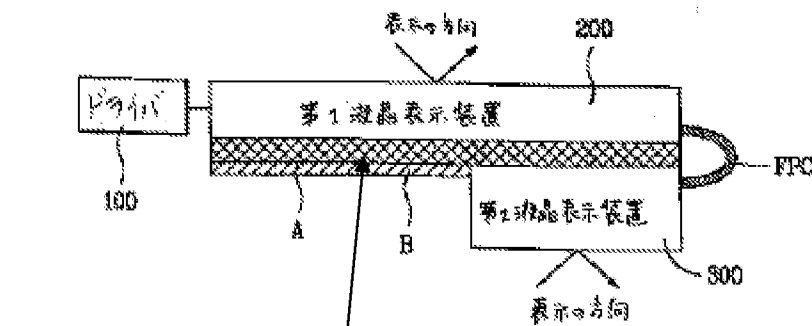
In addition to Kin Kochu, Nagakubo et al, and Im et al as disclosed above, Im discloses wherein the number of light emitting devices in the first set is larger than the number in the second set (see drawing below)

Regarding Claim 17.

In addition to Kin Kochu, Nagakubo et al, and Im et al as disclosed above, Kin Kochu discloses wherein the first set of light emitting devices contribute to light to be emitted through the light guide to illuminate the first display (200) and the second set of light emitting devices contribute to light being emitted through the light guide (A) to illuminate the second display (300)

Regarding Claim 18.

In addition to Kin Kochu, Nagakubo et al, and Im et al as disclosed above, Im discloses wherein when the second set of light emitting devices are a subset within the first set of light emitting devices. (shown below)



If you place the LED's of Fig. 8 into the light guide of Kin Kochu, the second LCD (300) will have less LEDs. And the LEDs 11b are a set. The last few are subsets of the set.

Subsets of the set of LEDs 11b.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUCY P. CHIEN whose telephone number is (571)272-8579. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571)272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2871

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lucy P Chien
Examiner
Art Unit 2871

/Dung Nguyen/
Primary Examiner, Art Unit 2871